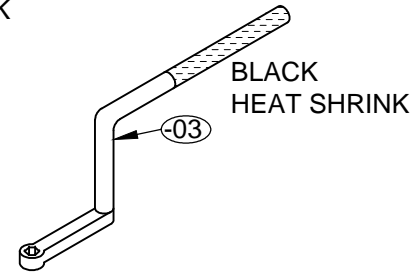
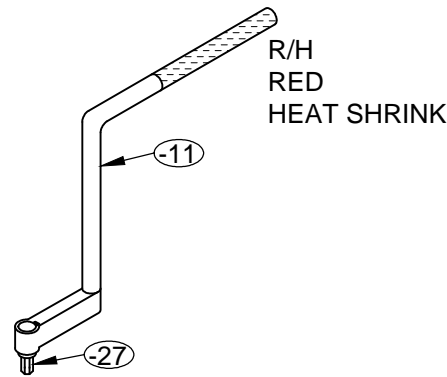
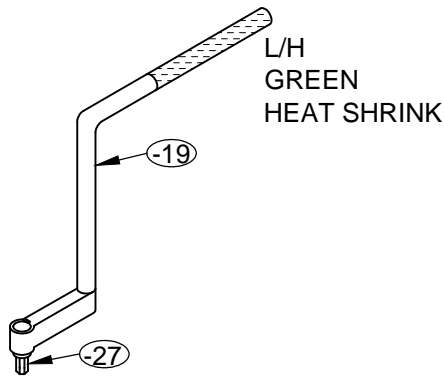


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REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
—	DRAWN FROM PURCHASED TOOL.	8/26/09	RJC	
1	CH'D P/N -11 & -19 DIM 1.625 TO 1.578 PER D.W. & RATCHET HANDLE CUT OFF DIM 1.375 TO 1.250.	10/14/09	RJC	RW
1A	ADDED CUSTOMER INSTRUCTION SHEET, ADDED L/H & R/H TO -19 -11 PER R.W.	5/25/11	RJC	RW
1B	CH'D TITLE BLOCK WAS RED BARN IS DART. MOVED ALL DRAWINGS TO SEPARATE SHEETS. CH'D TITLE BLOCK TOLERANCES .XXX WAS ±.005 IS ±.010, .XX WAS ±.01 IS ±.03. -03 CH'D DIMS WAS Ø.313 IS (Ø.313), WAS 4.00 IS (4.00), WAS 2.00 IS (2.00), WAS R.25 IS (R.25). -05, & -13 CH'D DIM WAS Ø.313 IS (Ø.313). -11 CH'D DIMS WAS 3.375 IS (3.375), WAS Ø.313 IS (Ø.313), WAS 4.125 IS (4.125), WAS R.25 IS (R.25), DELETED DIMS .369 & .425. -15 ADDED DIM (.425). -19 CH'D DIMS WAS 3.375 IS (3.375), WAS Ø.313 IS (Ø.313), WAS 4.125 IS (4.125), WAS R.25 IS (R.25). DELETED -21.	7/3/14	DPD	GE



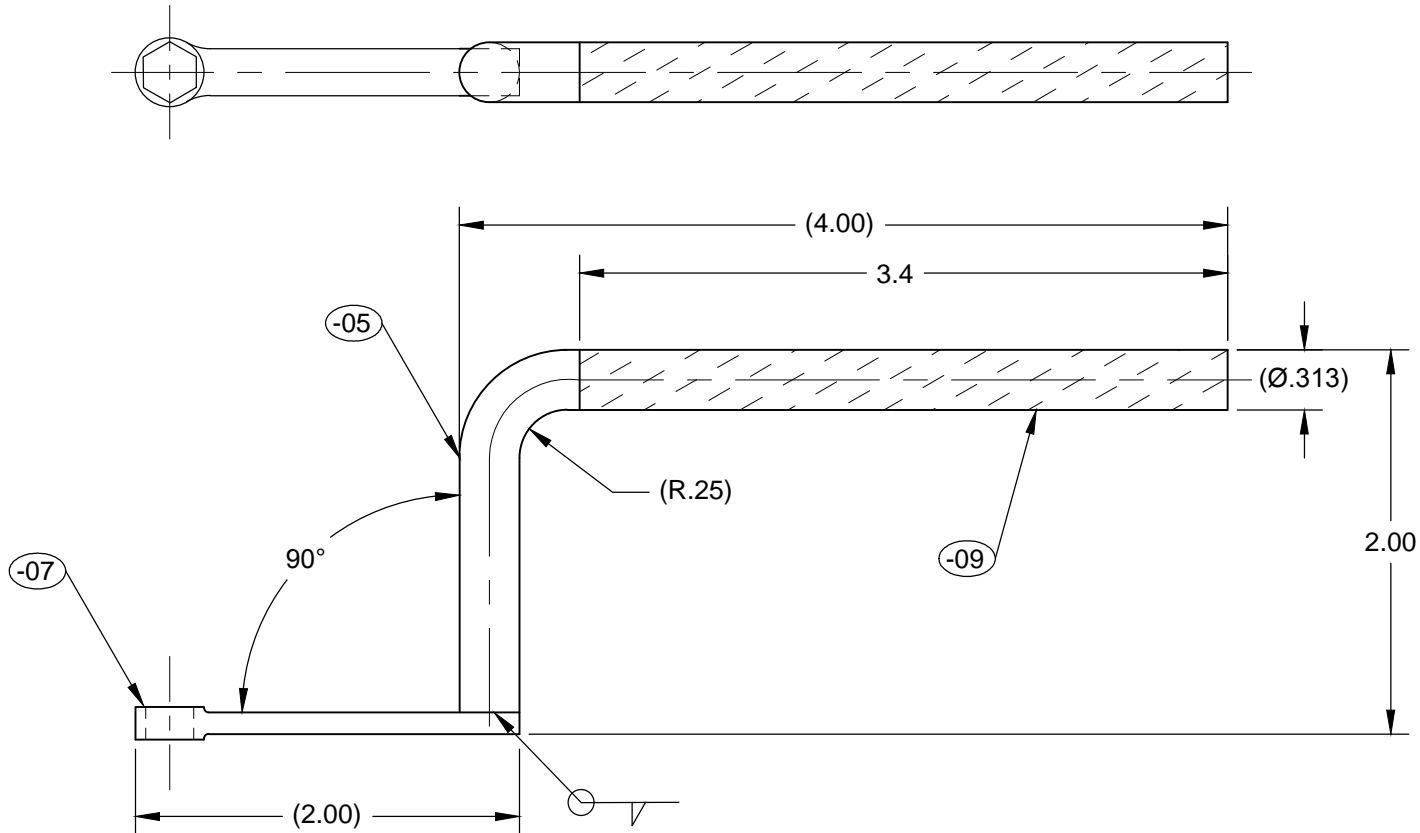
ASSY QTY	ASSY QTY	ASSY QTY	ASSY QTY	B/O	PART #	UNIT QTY	DESCRIPTION	MATERIAL	B/O INFORMATION OR SPECIFICATIONS	Pg.
					-01	1	WRENCH SET		CONSISTS OF -03, -11, & -19	1
					-03		COMPRESSOR WRENCH WELDMENT ASSY.			2
					-05		HANDLE	316 S.S.	Ø5/16 x 5-3/8	3
					-07		BOX END WRENCH		7/32 6pt SNAP ON #OXI7SB (MODIFIED)	4
					-09		BLACK HEAT SHRINK		Ø1/2 x 3-3/8 NORVAC # 301-1/2-BK-ESP (MODIFIED)	2
					-11		R/H RATCHET WRENCH WELDMENT ASSY.			5
1	1				-13		HANDLE	316 S.S.	Ø5/16 x 7	6
	1				-15		RATCHET HEAD		MINI RATCHET MSC #05045166 or 05045174 (MODIFIED)	7
	1				-17		RED HEAT SHRINK		Ø1/2 x 2-3/4 NORVAC # 301-1/2-R-ESP	5
					-19		L/H RATCHET WRENCH WELDMENT ASSY.			8
1					-23		RATCHET HEAD		SAME AS -15 RATCHET HEAD (MODIFIED)	9
1					-25		GREEN HEAT SHRINK		Ø1/2 x 2-3/4 NORVAC # 301-1/2-G-ESP	8
					-27		HEX BIT		9/64 HEX MSC #05045315 (MODIFIED)	10
ASSY QTY	ASSY QTY	ASSY QTY	ASSY QTY							
-19	-11	-03	-01							



TITLE		WRENCH SET, COMPRESSOR CASE	
DWG NO.	RBT18717	REV	1B
MAT'L	DRAWN BY: CLOUGH		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		APPROVED <i>D Weil</i>	
.XXX ± .010 FRACTIONS ± 1/32		HEAT TREAT	
.XX ± .03 ANGLES ± 5°		FINISH	
.X ± .1		SPEC	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R		USED ON MODEL	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING		R.R. 250	
SCALE	1:4	DATE	8-26-09
		SHEET	1 of 11

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REV	DESCRIPTION	REVISIONS		
		DATE	INITIAL	APPROVED
1B	-03 CH'D DIMS WAS Ø.313 IS (Ø.313), WAS 4.00 IS (4.00), WAS 2.00 IS (2.00), WAS R.25 IS (R.25).	7/3/14	DPD	GE

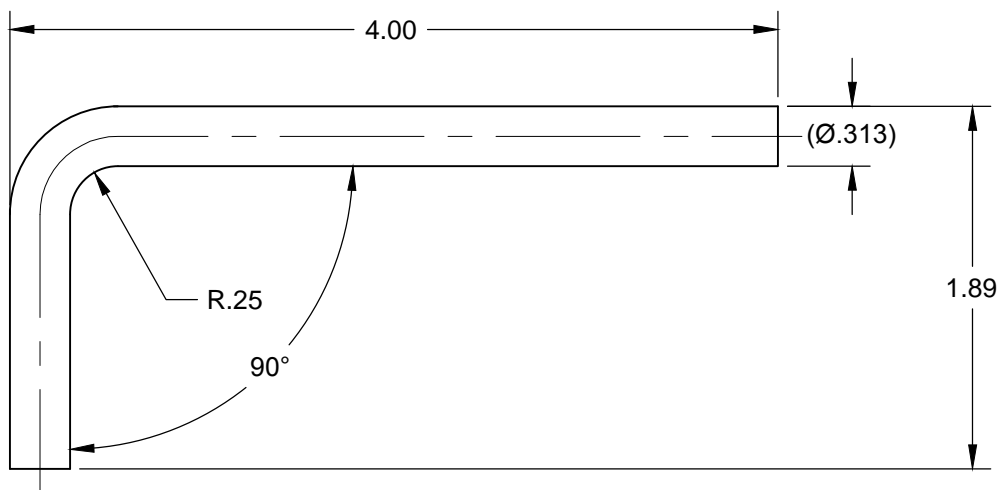


(-03)  
COMPRESSOR  
WRENCH WELDMENT

<b>DART AEROSPACE</b>	
TITLE WRENCH SET, COMPRESSOR CASE	
DWG NO. RBT18717-03	REV 1B
MAT'L UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/32 .XX ± .03 ANGLES ± 5° X ± .1	DRAWN BY: CLOUGH APPROVED: <i>D Weil</i> HEAT TREAT FINISH SPEC
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES 015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	USED ON MODEL R.R. 250
SCALE 1:1	DATE 8-26-09 SHEET 2 of 11

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REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1B	-05 CH'D DIM WAS Ø.313 IS (Ø.313).	7/3/14	DPD	GE

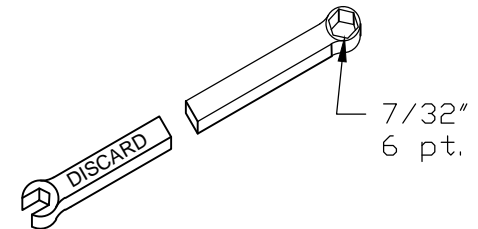
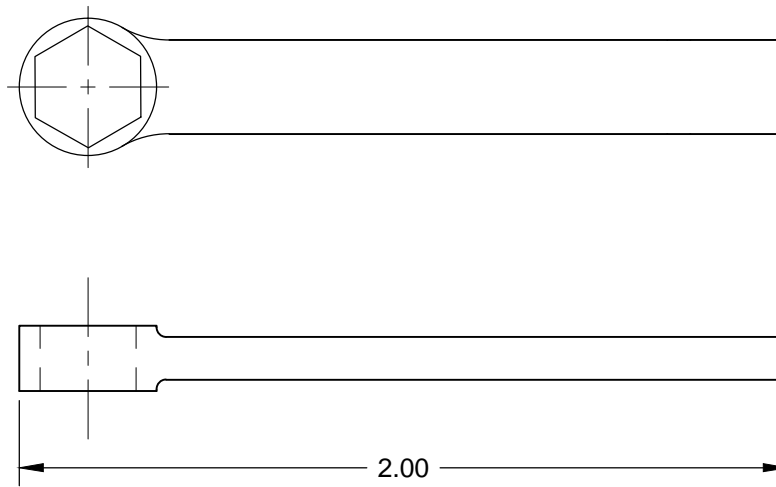


(-05)  
HANDLE

<b>DART AEROSPACE</b>	
TITLE WRENCH SET, COMPRESSOR CASE	
DWG NO. RBT18717-05	REV 1B
MAT'L 316 S.S.	DRAWN BY: CLOUGH
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
.XXX ± .010	FRACTIONS ± 1/32
.XX ± .03	ANGLES ± 5°
X ± .1	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES 015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
APPROVED <i>D Weil</i>	
HEAT TREAT FINISH	
SPEC	
USED ON MODEL R.R. 250	
SCALE 1:1	DATE 8-26-09
SHEET 3 of 11	

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REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED

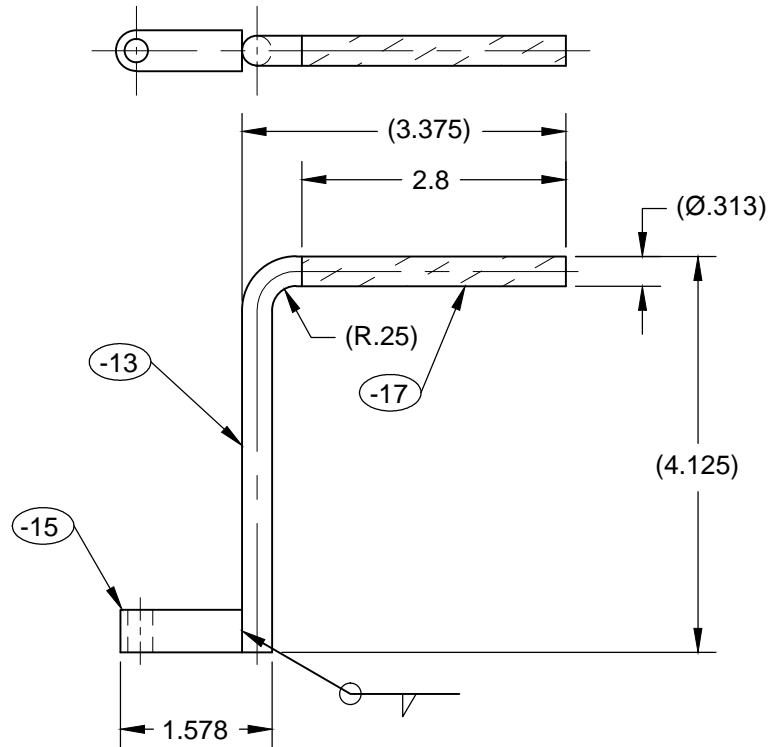


(-07)  
BOX END  
WRENCH

<b>DART AEROSPACE</b>	
TITLE WRENCH SET, COMPRESSOR CASE	
DWG NO. RBT18717-07	REV 1B
MAT'L UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/32 .XX ± .03 ANGLES ± 5° X ± .1	DRAWN BY: CLOUGH APPROVED <i>D Weil</i> HEAT TREAT FINISH SPEC USED ON MODEL R.R. 250
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE 2:1	DATE 8-26-09 SHEET 4 of 11

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REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1	CH'D P/N -11 & -19 DIM 1.625 TO 1.578 PER D.W. & RATCHET HANDLE CUT OFF DIM 1.375 TO 1.250.	10/14/09	RJC	RW
1B	-11 CH'D DIMS WAS 3.375 IS (3.375), WAS Ø.313 IS (Ø.313), WAS 4.125 IS (4.125), WAS R.25 IS (R.25), DELETED DIMS .369 & .425.	7/3/14	DPD	GE



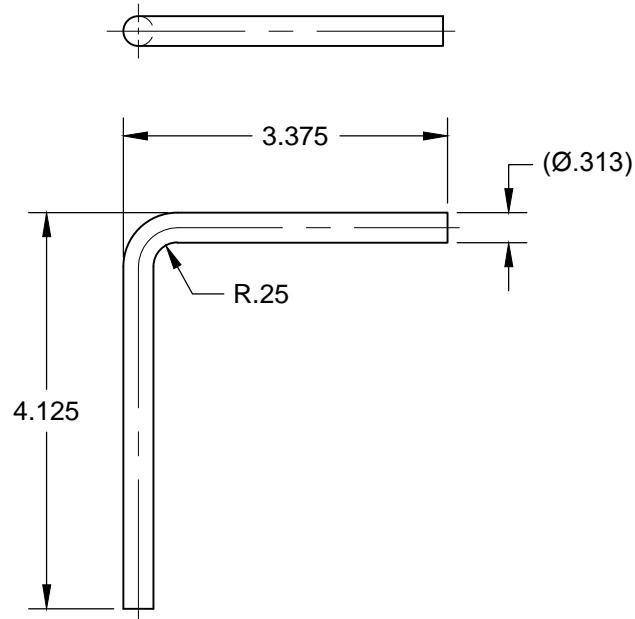
(-11)  
R/H RATCHET  
WELDMENT ASSY.

**NOTE:**  
WHEN WELDING STOP FREQUENTLY & COOL  
TO KEEP FROM TEMPERING RATCHET  
SPRING.

<b>DART AEROSPACE</b>	
TITLE WRENCH SET, COMPRESSOR CASE	
DWG NO. RBT18717-11	REV 1B
MAT'L UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/32 .XX ± .03 ANGLES ± 5° X ± .1	DRAWN BY: CLOUGH APPROVED: <i>D Weil</i> HEAT TREAT FINISH SPEC
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	USED ON MODEL R.R. 250
SCALE 1:2	DATE 8-26-09 SHEET 5 of 11

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REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1B	-13 CH'D DIM WAS Ø.313 IS (Ø.313).	7/3/14	DPD	GE

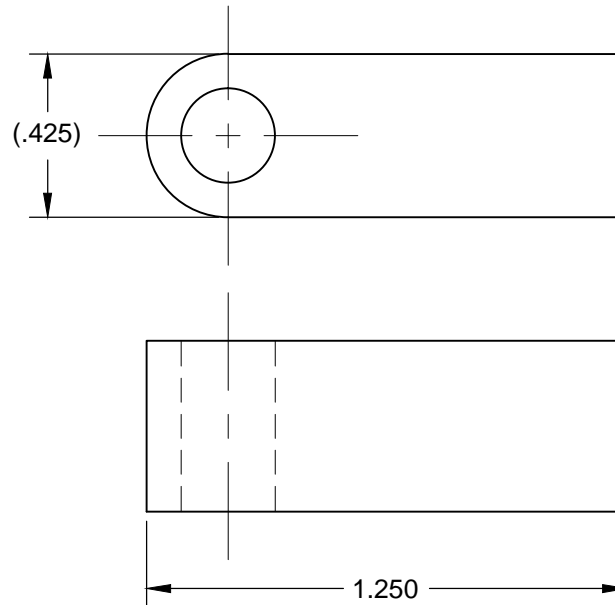


(-13)  
HANDLE

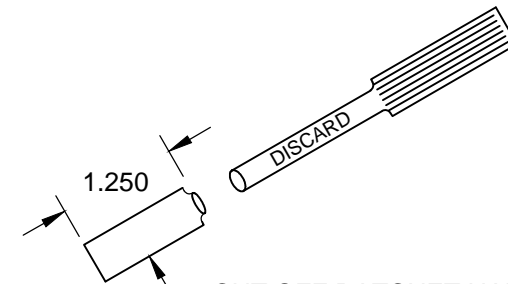
<b>DART AEROSPACE</b>	
TITLE WRENCH SET, COMPRESSOR CASE	
DWG NO. RBT18717-13	REV 1B
MAT'L 316 S.S.	DRAWN BY: CLOUGH
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	APPROVED <i>D Weil</i>
.XXX ± .010 FRACTIONS ± 1/32	HEAT TREAT
.XX ± .03 ANGLES ± 5°	FINISH
X ± .1	SPEC
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES 015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	USED ON MODEL R.R. 250
SCALE 1:2	DATE 8-26-09
SHEET 6 of 11	

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REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1B	-15 ADDED DIM (.425).	7/3/14	DPD	GE



(-15)  
RATCHET  
HEAD

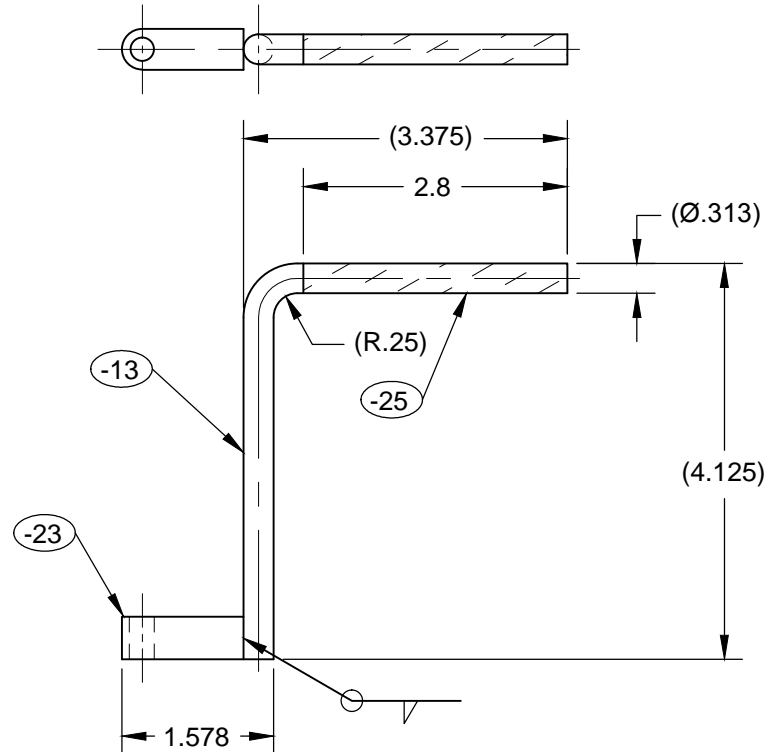


NOTE:  
REMOVE MANUFACTURE INFO, LEAVE TORQUE INFO.

<b>DART AEROSPACE</b>	
TITLE WRENCH SET, COMPRESSOR CASE	
DWG NO. RBT18717-15	REV 1B
MAT'L UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/32 .XX ± .03 ANGLES ± 5° X ± .1	DRAWN BY: CLOUGH APPROVED <i>D Weil</i> HEAT TREAT FINISH SPEC
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	USED ON MODEL R.R. 250
SCALE 2:1	DATE 8-26-09 SHEET 7 of 11

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REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1	CH'D P/N -11 & -19 DIM 1.625 TO 1.578 PER D.W. & RATCHET HANDLE CUT OFF DIM 1.375 TO 1.250.	10/14/09	RJC	RW
1B	-19 CH'D DIMS WAS 3.375 IS (3.375), WAS Ø.313 IS (Ø.313), WAS 4.125 IS (4.125), WAS R.25 IS (R.25).	7/3/14	DPD	GE



(-19)  
L/H RATCHET  
WELDMENT ASSY.

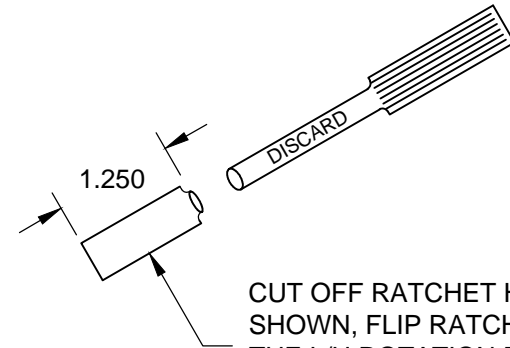
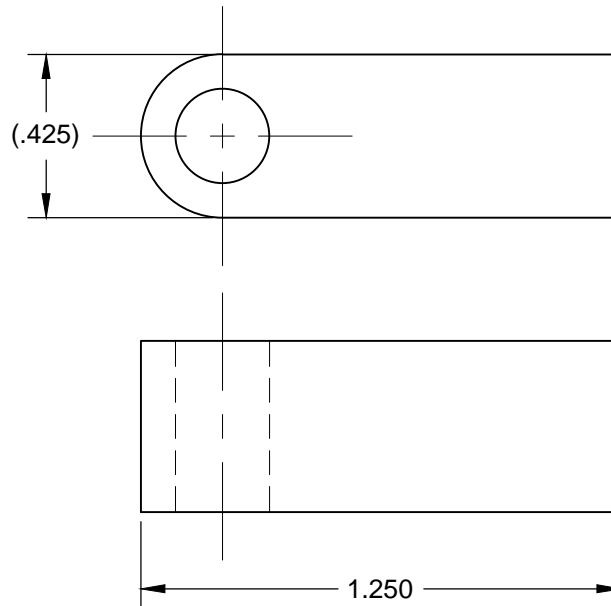
**NOTE:**  
WHEN WELDING STOP FREQUENTLY & COOL  
TO KEEP FROM TEMPERING RATCHET  
SPRING.

<b>DART AEROSPACE</b>	
TITLE WRENCH SET, COMPRESSOR CASE	
DWG NO. RBT18717-19	REV 1B
MAT'L UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/32 .XX ± .03 ANGLES ± 5° .X ± .1	DRAWN BY: CLOUGH APPROVED <i>D Weil</i> HEAT TREAT FINISH SPEC
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	USED ON MODEL R.R. 250
SCALE 1:2	DATE 8-26-09 SHEET 8 of 11



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REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1	CH'D P/N -11 & -19 DIM 1.625 TO 1.578 PER D.W. & RATCHET HANDLE CUT OFF DIM 1.375 TO 1.250.	10/14/09	RJC	RW



CUT OFF RATCHET HANDLE AS SHOWN, FLIP RATCHET HEAD TO THE L/H ROTATION POSITION FOR WELDING.

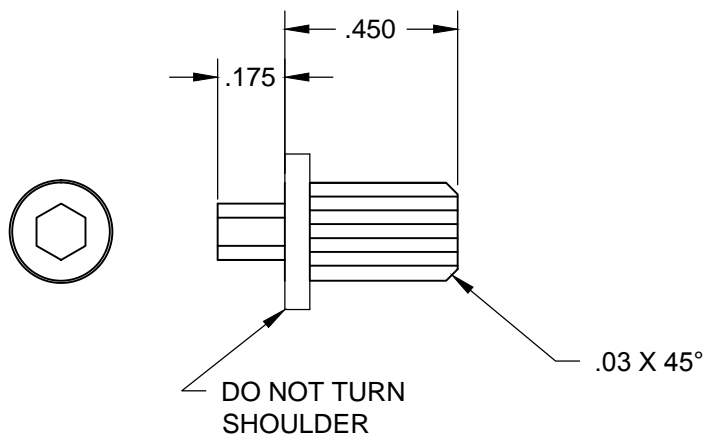
**NOTE:**  
REMOVE MANUFACTURE INFO, LEAVE TORQUE INFO.

(-23)  
RATCHET  
HEAD

<b>DART AEROSPACE</b>	
TITLE WRENCH SET, COMPRESSOR CASE	
DWG NO. RBT18717-23	REV 1B
MAT'L UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/32 .XX ± .03 ANGLES ± 5° X ± .1	DRAWN BY: CLOUGH APPROVED <i>D Weil</i> HEAT TREAT FINISH SPEC
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	USED ON MODEL R.R. 250
SCALE 2:1	DATE 8-26-09 SHEET 9 of 11

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REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1	CH'D P/N -11 & -19 DIM 1.625 TO 1.578 PER D.W. & RATCHET HANDLE CUT OFF DIM 1.375 TO 1.250.	10/14/09	RJC	RW



(-27)  
HEX BIT

<b>DART AEROSPACE</b>	
TITLE WRENCH SET, COMPRESSOR CASE	
DWG NO. RBT18717-27	REV 1B
MAT'L UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES .XXX ± .010 FRACTIONS ± 1/32 .XX ± .03 ANGLES ± 5° .X ± .1	DRAWN BY: CLOUGH APPROVED <i>D Weil</i> HEAT TREAT FINISH SPEC
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	USED ON MODEL R.R. 250
SCALE 2:1	DATE 8-26-09 SHEET 10 of 11

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REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1A	ADDED CUSTOMER INSTRUCTION SHEET PER R.W.	5/25/11	RJC	RW

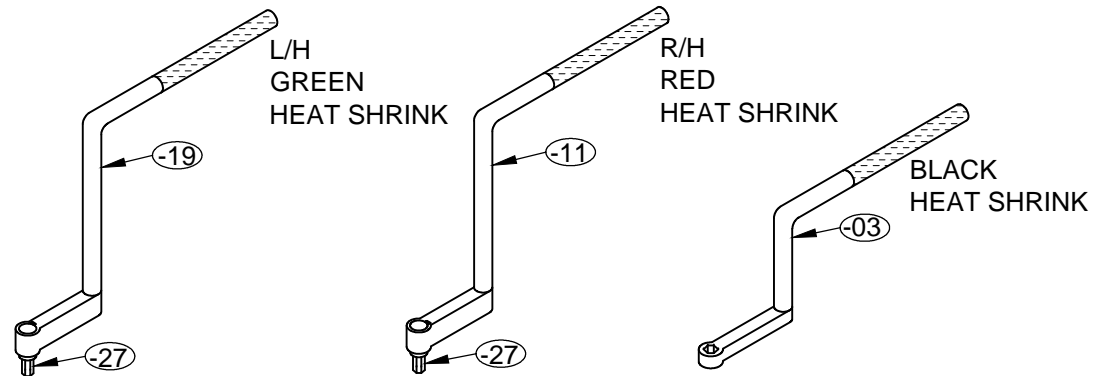
## COMPRESSOR CASE WRENCH SET INSTRUCTIONS.

HOLD COMPRESSOR NUT WITH 6 POINT WRENCH,  
BLACK HANDLE.

THERE ARE TWO RATCHETS. ONE HAS A GREEN  
HANDLE THAT IS USED TO REMOVE  
(COUNTERCLOCKWISE) COMPRESSOR BOLTS.  
ONE HAS A RED HANDLE THAT IS USED TO  
INSTALL (CLOCKWISE) COMPRESSOR BOLTS.

BITS SLIDE OUT AND CAN BE INSTALLED IN  
REVERSE TO ALLOW FOR RATCHETING OF FRONT  
SUPPORT HARDWARE.

IT IS NECESSARY TO REMOVE ALL HARDLINES  
AND BLEED VALVE TO GAIN ACCESS TO ALL  
COMPRESSOR BOLTS AND NUTS.



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1-541-344-9953  
e-mail: sales@dartaero.com  
dartaerospace.com

TITLE WRENCH SET, COMPRESSOR CASE			
DWG. NO. RBT18717	REV 1B	CUSTOMER 1 of 1	
SCALE 1:4	DATE 6/10/14	SHEET 11 of 11	

